

SEQUENCE LISTING

<110> Kevin Baker et al. HUMAN TUMOR NECROSIS FACTOR RECEPTOR TR16 <120> <130> PF514P1 60/268,364 <150> 2001-02-14 <151> <150> 09/637,856 <151> 2000-08-10 <150> 60/148,348 <151> 1999-08-12 <150> 60/148,683 <151> 1999-08-13 <150> 60/148,758 <151> 1999-08-16 <150> 60/148,870 <151> 1999-08-13 <150> 60/149,181 1999-08-17 <151> <150> 60/149,453 <151> 1999-08-18 <150> 60/149,498 <151> 1999-08-18 <160> 43 PatentIn version 3.0 <170> <210> <211> 3390 <212> DNA <213> human <400> atgctgttcc gcgcccgggg gccggtacgg ggcaggggct ggggggggcc ggcggaggct

60

ccccgccgcg ggcgctcgcc gccctggagc cccgcctgga tttgctgctg ggcgctcgcc ggctgccagg cggcctgggc tggggacctg ccctcctcct ccagccgccc gcttcctcct tgccaggaga aagattatca ctttgaatat acggaatgtg atagcagtgg ctccaggtgg 240 agagttgcca ttccaaattc tgcagtggac tgctctggcc tgcctgaccc agtgagaggc 300 aaagaatgca ctttctcctg tgcttctgga gagtatctag aaatgaagaa ccaggtatgc agtaagtgtg gtgaaggcac ctattccttg ggcagtggca tcaaatttga tgaatgggat gaattgccgg caggattttc taacatcgca acattcatgg acactgtggt gggcccttct 480 gacagcaggc cagacggctg taacaactct tcttggatcc ctcgtggaaa ctacatagaa 540 tctaatcgtg atgactgcac ggtgtctttg atctatgctg tgcaccttaa gaagtcaggc tatgtcttct ttgagtacca gtatgtcgac aacaacatct tctttgagtt ctttattcaa 660 aatgatcagt gccaggagat ggacaccacc actgacaagt gggtaaaact tacagacaat 720 ggagaatggg gctctcattc tgtaatgctg aaatcaggca caaacatact ctactggaga actacaggca tccttatggg ttctaaggcg gtcaagcctg tgctggtaaa aaatatcaca attgaagggg tggcgtacac atcagaatgt tttccttgca agccaggcac attcagcaac 900 aaaccaggtt cattcaactg ccaggtgtgt cccagaaaca cctattctga gaaaggagcc 960 aaagaatgta taaggtgtaa agacgactct caattttcag gatccagtga gtgtacagag

1020

| cgccctccct 1080 | gtaccacaaa | agactatttc | cagatccata | ctccatgtga | tgaagaagga |
|--------------------|-----------------|------------|------------|------------|------------|
| aagacacaga 1140 | taatgtacaa | gtggatagag | cccaaaatct | gccgggagga | tctcacagat |
| gctattagat 1200 | tgcccccttc | tggagagaag | aaggattgtc | cgccttgcaa | ccctggattt |
| tataacaatg 1260 | gatcatcttc | ttgccatccc | tgtcctcctg | gaacattttc | agatggaacc |
| aaagaatgta 1320 | gaccatgtcc , | agcaggaacg | gagcctgcac | ttggctttga | atataaatgg |
| tggaatgtcc 1380 | ttcctggcaa | catgaaaact | tcctgcttca | atgttgggaa | ttcaaagtgc |
| gatggaatga 1440 | atggttggga | ggtggctgga | gatcatatcc | agagtggggc | tggaggttct |
| gacaatgatt 1500 | acctgatctt | aaacttgcat | atcccaggat | ttaaaccacc | aacatctatg |
| actggagcca 1560 | cgggttctga | actaggaaga | ataacatttg | tctttgagac | cctctgttca |
| gctgactgtg 1620 | ttttgtactt | catggtggat | attaatagaa | aaagtacaaa | tgtggtagaa |
| tcgtggggtg 1680 | gaaccaaaga | aaaacaagct | tacacccata | tcatcttcaa | gaatgcaact |
| tttacattta 1740 | catgggcatt | ccagagaact | aatcagggtc | aagataatag | acggttcatc |
| aatgacatgg 1800 | tgaagattta | ttctatcaca | gccactaatg | cagttgatgg | ggtggcgtcc |
| tcatgccgtg 1860 | cctgtgccct | cggttctgaa | cagtcgggtt | catcgtgtgt | cccctgccct |
| ccaggccact 1920 | acattgagaa | agaaaccaac | cagtgcaagg | aatgtccacc | tgacacctac |
| ctgtccatac 1980 | atcaggtcta | tggcaaagag | gcttgtattc | catgcgggcc | tgggagtaaa |

| aacaatcagg 2040 | accattcggt | ttgctatagt | gactgctttt | tctaccatga | aaaagaaaat |
|--------------------|------------|------------|------------|-------------|------------|
| cagattttgc 2100 | actatgactt | tagcaacctc | agcagtgtgg | gctcattaat | gaatggcccc |
| agcttcacct 2160 | ccaaaggaac | aaaatacttc | catttcttca | atatcagttt | atgtgggcat |
| gaggggaaga 2220 | agatggctct | ctgtaccaac | aatataacag | actttacagt | aaaagaaata |
| gtggcagggt 2280 | cagatgatta | cacaaatttg | gtaggggcat | ttgtatgcca | gtcaacaatt |
| attccttctg 2340 | aaagtaaggg | tttccgagca | gccttatcat | cacaatccat | cattctggca |
| gatacattca 2400 | taggagtcac | agttgaaacc | acattgaaaa | atattaatat | aaaagaagat |
| atgttcccag | ttccaacaag | ccaaatacca | gatgtgcatt | tcttttataa | gtcttctaca |
| gcaacaacat 2520 | cttgtattaa | tggccgatca | actgctgtga | aaatgaggtg | taatcctact |
| aaatctggag 2580 | caggagtgat | ttcagtcccc | agcaagtgcc | cagcaggtac | ctgtgatggg |
| tgtacgttct 2640 | atttcctgtg | ggagagtgct | gaagettgee | ctctgtgtac | ggagcatgac |
| ttccatgaga 2700 | ttgagggagc | ctgcaagaga | ggatttcagg | aaaccttgta. | tgtgtggaat |
| gaacctaaat 2760 | ggtgcattaa | aggaatttct | ttgcctgaga | aaaagttggc | aacctgtgaa |
| acggttgact 2820 | tttggctgaa | ggtgggagcc | ggtgtgggag | cttttactgc | cgttttgctg |
| gtggctctga 2880 | cctgctactt | ctggaaaaag | aatcaaaaga | aaaagaagac | cattttgaat |
| ctgttcaact 2940 | gaaaacctca | agatccccaa | atatatgaag | agacagtgct | gtagccttga |

- gactaatgaa caaagaaacc tgctctagtt ttacaggacc atattttagg gtctgtcctc 3000
- atacctgtca cattggtgat ctcacagagg agggccatgc cgctgaaaag ggaaggagat 3060
- tgaaacattt gattgcctta tcacatggtc aagtaccttg ccaaataaag gaaagcaaat 3120
- gatttgggtc tcaactgaag atgaagctca actcaggaag agatttatct gtatatacac 3180
- ataactgaaa accaagttta agcccaccaa tgcactgctg atgcatgcca tataattaat 3240
- gggtaacttt tattctttat gatgtctaca taacaagtgt gatttggaag gcacatgtga 3300
- gcatatgcat tatgatccaa tttatgtttt ttctttgttt atattttggg gaaaattaaa 3360
- attttttaa ggtaaaaaa aaaaaaaaa 3390
- <210> 2
- <211> 963
- <212> PRT
- <213> human
- <400> 2
- Met Leu Phe Arg Ala Arg Gly Pro Val Arg Gly Arg Gly Trp Gly Arg 1 5 10 15
- Pro Ala Glu Ala Pro Arg Arg Gly Arg Ser Pro Pro Trp Ser Pro Ala 20 25 30
- Trp Ile Cys Cys Trp Ala Leu Ala Gly Cys Gln Ala Ala Trp Ala Gly 35 40 45
- Asp Leu Pro Ser Ser Ser Ser Arg Pro Leu Pro Pro Cys Gln Glu Lys 50 55 60
- Asp Tyr His Phe Glu Tyr Thr Glu Cys Asp Ser Ser Gly Ser Arg Trp 65 75 80
- Arg Val Ala Ile Pro Asn Ser Ala Val Asp Cys Ser Gly Leu Pro Asp

| | | | | 85 | | | | | 90 | | | | | 95 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Val | Arg | Gly 100 | Lys | Glü | Cys | Thr | Phe 105 | Ser | Cys | Ala | Ser | Gly 110 | Glu | Tyr |
| Leu | Glu | Met 115 | Lys | Asn | Gln | Val | Cys 120 | Ser | Lys | Cys | Gly | Glu 125 | Gly | Thr | Tyr |
| Ser | Leu 130 | Gly | Ser | Gly | Ile | Lys 135 | Phe | Asp | Glu | Trp | Asp 140 | Glu | Leu | Pro | Ala |
| Gly 145 | Phe | Ser | Asn, | Ile | Ala 150 | Thr | Phe | Met | Asp | Thr 155 | Val | Val | Gly | Pro | Ser 160 |
| Asp | Ser | Arg | Pro | Asp 165 | Gly | Cys | Asn | Asn | Ser 170 | Ser | Trp | Ile | Pro | Arg 175 | Gly |
| Asn | Tyr | Ile | Glu 180 | Ser | Asn | Arg | Asp | Asp 185 | Cys | Thr | Val | Ser | Leu 190 | Ile | Tyr |
| Ala | Val | His 195 | Leu | Lys | Lys | Ser | Gly 200 | Tyr | Val | Phe | Phe | Glu 205 | Tyr | Gln | Tyr |
| Val | Asp 210 | Asn | Asn | Ile | Phe | Phe 215 | Glu | Phe | Phe | Ile | Gln 220 | Asn | Asp | Gln | Cys |
| Gln 225 | Glu | Met | Asp | Thr | Thr 230 | Thr | Asp | Lys | Trp | Val 235 | Lys | Leu | Thr | Asp | Asn 240 |
| Gly | Glu | Trp | Gly | Ser 245 | His | Ser | Val | Met | Leu 250 | Lys | Ser | Gly | Thr | Asn 255 | Ile |
| Leu | Tyr | Trp | Arg 260 | Thr | Thr | Gly | Ile | Leu 265 | Met | Gly | Ser | Lys | Ala 270 | Val | Lys |
| Pro | Val | Leu 275 | Val | Lys | Asn | Ile | Thr 280 | Ile | Glu | Gly | Val | Ala 285 | Tyr | Thr | Ser |
| Glu | Cys 290 | Phe | Pro | Cys | Lys | Pro 295 | Gly | Thr | Phe | Ser | Asn 300 | Lys | Pro | Gly | Ser |
| Phe 305 | Asn | Cys | Gln | Val | Cys 310 | Pro | Arg | Asn | Thr | Туѓ 315 | Ser | Glu | Lys | Gly | Ala 320 |
| Lys | Glu | Cys | Ile | Arg 325 | | Lys | Asp | Asp | Ser 330 | Gln | Phe | Ser | Gly | Ser 335 | Ser |
| Glu | Cys | Thr | Glu | Arg | Pro | Pro | Cys | Thr | Thr | Lys | Asp | Tyr | Phe | Gln | Ile |

PF514P1replacement.ST25.txt

| | | | 340 | | | | | 345 | | | | • | 350 | | |
|------------|------------|------------|------------|------------|------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| His | Thr | Pro 355 | Cys | Asp | Glü | Glu | Gly 360 | Lys | Thr | Gln | Ile | Met 365 | Tyr | Lys | Trp |
| Ile | Glu 370 | Pro | Lys | Ile | Cys | Arg 375 | Glu | Asp | Leu | Thr | Asp 380 | Ala | Ile | Arg | Leu |
| Pro 385 | Pro | Ser | Gly | Glu | Lys 390 | Lys | Asp | Cys | Pro | Pro 395 | Cys | Asn | Pro | Gly | Phe 400 |
| Tyr | Asn | Asn | Gly | Ser 405 | Ser | Ser | Cys | His | Pro 410 | Cys | Pro | Pro | Gly | Thr 415 | Phe |
| Ser | Asp | Gly | Thr 420 | Lys | Glu | Cys | Arg | Pro 425 | Cys | Pro | Ala | Gly | Thr 430 | Glu | Pro |
| Ala | Leu | Gly 435 | Phe | Glu | Tyr | Lys | Trp 440 | Trp | Asn | Val | Leu | Pro 445 | Gly | Asn | Met |
| Lys | Thr 450 | Ser | Cys | Phe | Asn | Val 455 | Gly | Asn | Ser | Lys | Cys 460 | Asp | Gly | Met | Asn |
| Gly 465 | Trp | Glu | Val | Ala | Gly 470 | Asp | His | Ile | Gln | Ser 475 | Gly | Ala | Gly | Gly | Ser 480 |
| Asp | Asn | Asp | Tyr | Leu 485 | Ile | Leu | Asn | Leu | His 490 | Ile | Pro | Gly | Phe | Lys 495 | Pro |
| Pro | Thr | Ser | Met 500 | Thr | Gly | Ala | Thr | Gly 505 | Ser | Glu | Leu | Gly | Arg 510 | Ile | Thr |
| Phe | Val | Phe 515 | Glu | Thr | Leu | Cys | Ser 520 | Ala | Asp | Cys | Val | Leu 525 | Tyr | Phe | Met |
| Val | Asp 530 | | Asn | Arg | Lys | Ser 535 | Thr | Asn | Val | Val | Glu 540 | Ser | Trp | Gly | Gly |
| Thr 545 | Lys | Glu | Lys | Gln | Ala 550 | Tyr | Thr | His | Ile | Ile 555 | Phe | Lys | Asn | Ala | Thr 560 |
| Phe | Thr | Phe | Thr | Trp 565 | Ala | Phe | Gln | Arg | Thr 570 | Asn | Gln | Gly | Gln | Asp 575 | Asn |
| Arg | Arg | Phe | Ile 580 | Asn | Asp | Met [.] | Val | Lys 585 | Ile | Tyr | Ser | Ile | Thr 590 | Ala | Thr |
| Asn | Ala | Val | Asp | Gly | Val | Ala | Ser | Ser | Cys | Arg | Ala | Cys | Ala | Leu | Gly |

PF514Plreplacement.ST25.txt

| | | 595 | | | | | 600 | | • | | | 605 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser | Glu 610 | Gln | Ser | Gly | Ser | Ser 615 | Cys | Val | Pro | Cys | Pro 620 | Pro | Gly | His | Tyr |
| Ile 625 | Glu | Lys | Glu | Thr | Asn 630 | Gln | Cys | Lys | Glu | Cys 635 | Pro | Pro | Asp | Thr | Tyr 640 |
| Leu | Ser | Ile | His | Gln 645 | Val | Tyr | Gly | Lys | Glu 650 | Ala | Cys | Ile | Pro | Cys 655 | Gly |
| Pro | Gly | Ser | Lys 660 | Asn | Asn | Gln | Asp | His 665 | Ser | Val | Cys | Tyr | Ser 670 | Asp | Cys |
| Phe | Phe | Tyr 675 | His | Glu | Lys | Glu | Asn 680 | Gln | Ile | Leu | His | Tyr 685 | Asp | Phe | Ser |
| Asn | Leu 690 | Ser | Ser | Val | Gly | Ser 695 | Leu | Met | Asn | Gly | Pro 700 | Ser | Phe | Thr | Ser |
| Lys 705 | Gly | Thr | Lys | Tyr | Phe 710 | His | Phe | Phe | Asn | Ile 715 | Ser | Leu | Суѕ | Gly | His 720 |
| Glu | Gly | ГÀ̀г | Lys | Met 725 | Ala | Leu | Cys | Thr | Asn 730 | Asn | Ile | Thr | Asp | Phe 735 | Thr |
| Val | Lys | Glu | Ile 740 | Val | Ala | Gly | Ser | Asp 745 | Asp | Tyr | Thr | Asn | Leu 750 | Val | Gly |
| Ala | Phe | Val 755 | Cys | Gln | Ser | Thr | Ile 760 | Ile | Pro | Ser | Glu | Ser 765 | Lys | Gly | Phe |
| Arg | Ala 770 | Ala | Leu | Ser | Ser | Gln 775 | Ser | Ile | Ile | Leu | Ala 780 | Asp | Thr | Phe | Ile |
| Gly 785 | Val | Thr | Val | Glu | Thr 790 | | Leu | Lys | Asn | Ile 795 | Asn | Ile | Lys | Glu | Asp 800 |
| Met | Phe | Pro | Val | Pro 805 | Thr | Ser | Gln | Ile | Pro 810 | Asp | Val | His | Phe | Phe 815 | Tyr |
| Lys | Ser | Ser | Thr 820 | Ala | Thr | Thr | Ser | Cys 825 | Ile | Asn | Gly | Arg | Ser 830 | Thr | Ala |
| Val | Lys | Met 835 | Arg | Cys | Asn | Pro | Thr 840 | Lys | Ser | Gly | Ala | Gly 845 | Val | Ile | Ser |
| Val | Pro | Ser | Lys | Cys | Pro | Ala | Gly | Thr | Cys | Asp | Gly | Cys | Thr | Phe | Tyr |

860 855 850 Phe Leu Trp Glu Ser Ala Glu Ala Cys Pro Leu Cys Thr Glu His Asp 875 870 865 Phe His Glu Ile Glu Gly Ala Cys Lys Arg Gly Phe Gln Glu Thr Leu 890 885 Tyr Val Trp Asn Glu Pro Lys Trp Cys Ile Lys Gly Ile Ser Leu Pro Glu Lys Lys Leu Ala Thr Cys Glu Thr Val Asp Phe Trp Leu Lys Val 925 920 915 Gly Ala Gly Val Gly Ala Phe Thr Ala Val Leu Leu Val Ala Leu Thr 935 930 Cys Tyr Phe Trp Lys Lys Asn Gln Lys Lys Lys Thr Ile Leu Asn 960 955 950 945 Leu Phe Asn <210> 3 <211> 3556 <212> DNA human <213> <400> 3 atgctgttcc gcgcccgggg gccggtacgg ggcaggggct ggggggggcc ggcggaggct ccccgccgcg ggcgctcgcc gccctggagc cccgcctgga tttgctgctg ggcgctcgcc 120 ggctgccagg cggcctgggc tggggacctg ccctcctcct ccagccgccc gcttcctcct 180 tgccaggaga aagattatca ctttgaatat acggaatgtg atagcagtgg ctccaggtgg 240 agagttgcca ttccaaattc tgcagtggac tgctctggcc tgcctgaccc agtgagaggc aaagaatgca ctttctcctg tgcttctgga gagtatctag aaatgaagaa ccaggtatgc 360 agtaagtgtg gtgaaggcac ctattccttg ggcagtggca tcaaatttga tgaatgggat

gaattgccgg caggattttc taacatcgca acattcatgg acactgtggt gggcccttct 480 gacagcaggc cagacggctg taacaactct tcttggatcc ctcgtggaaa ctacatagaa 540 tctaatcgtg atgactgcac ggtgtctttg atctatgctg tgcaccttaa gaagtcaggc tatgtcttct ttgagtacca gtatgtcgac aacaacatct tctttgagtt ctttattcaa 660 aatgatcagt gccaggagat ggacaccacc actgacaagt gggtaaaact tacagacaat 720 ggagaatggg gctctcattc tgtaatgctg aaatcaggca caaacatact ctactggaga actacaggca tccttatggg ttctaaggcg gtcaagcctg tgctggtaaa aaatatcaca attgaagggg tggcgtacac atcagaatgt tttccttgca agccaggcac attcagcaac 900 aaaccaggtt cattcaactg ccaggtgtgt cccagaaaca cctattctga gaaaggagcc 960 aaagaatgta taaggtgtaa agacgactct caattttcag gatccagtga gtgtacagag cgccctccct gtaccacaaa agactatttc cagatccata ctccatgtga tgaagaagga 1080 aagacacaga taatgtacaa gtggatagag cccaaaatct gccgggagga tctcacagat 1140 gctattagat tgcccccttc tggagagaag aaggattgtc cgccttgcaa ccctggattt 1200 tataacaatg gatcatcttc ttgccatccc tgtcctcctg gaacattttc agatggaacc aaagaatgta gaccatgtcc agcaggaacg gagcctgcac ttggctttga atataaatgg 1320 tggaatgtcc ttcctggcaa catgaaaact tcctgcttca atgttgggaa ttcaaagtgc

gatggaatga atggttggga ggtggctgga gatcatatcc agagtggggc tggaggttct 1440 gacaatgatt acctgatctt aaacttgcat atcccaggat ttaaaccacc aacatctatg 1500 actggagcca cgggttctga actaggaaga ataacatttg tctttgagac cctctgttca gctgactgtg ttttgtactt catggtggat attaatagaa aaagtacaaa tgtggtagaa 1620 tcgtggggtg gaaccaaaga aaaacaagct tacacccata tcatcttcaa gaatgcaact 1680 tttacattta catgggcatt ccagagaact aatcagggtc aagataatag acggttcatc 1740 aatqacatqq tqaaqattta ttctatcaca gccactaatg cagttgatgg ggtggcgtcc 1800 tcatqccqtq cctqtqccct cggttctgaa cagtcgggtt catcgtgtgt cccctgccct 1860 ccaggccact acattgagaa agaaaccaac cagtgcaagg aatgtccacc tgacacctac 1920 ctgtccatac atcaggtcta tggcaaagag gcttgtattc catgcgggcc tgggagtaaa aacaatcagg accattcggt ttgctatagt gactgctttt tctaccatga aaaagaaaat -2040 cagattttqc actatgactt tagcaacctc agcagtgtgg gctcattaat gaatggcccc 2100 agetteacet ecaaaggaae aaaataette eatttettea atateagttt atgtgggeat gaggggaaga agatggctct ctgtaccaac aatataacag actttacagt aaaagaaata 2220 gtggcagggt cagatgatta cacaaatttg gtaggggcat ttgtatgcca gtcaacaatt 2280 attecttetg aaagtaaggg ttteegagea geettateat cacaateeat cattetggea

gatacattca taggagtcac agttgaaacc acattgaaaa atattaatat aaaagaagat 2400 atgttcccag ttccaacaag ccaaatacca gatgtgcatt tcttttataa gtcttctaca qcaacaacat cttqtattaa tqqccqatca actqctqtqa aaatqaqqtq taatcctact aaatctggag caggagtgat ttcagtcccc agcaagtgcc cagcaggtac ctgtgatggg 2580 tgtacgttct atttcctgtg ggagagtgct gaagcttgcc ctctgtgtac ggagcatgac 2640 ttccatgaga ttgagggagc ctgcaagaga ggatttcagg aaaccttgta tgtgtggaat 2700 qaacctaaat qqtqcattaa aggaatttct ttgcctgaga aaaagttggc aacctgtgaa 2760 acqqttqact tttqqctqaa ggtgggagcc ggtgtgggag cttttactgc cgttttgctg 2820 qtqqctctqa cctqctactt ctggaaaaag aatcaaaaac tggaatacaa atattccaag 2880 ttagtaatga cgactaactc aaaagagtgt gaactcccgg ctgcagacag ttgtgctatc atggaaggag aagataatga agaggaagtt gtatattcca ataaacagtc actactagga 3000 aaactcaaat ctttggcaac caaggaaaaa gaagaccatt ttgaatctgt tcaactgaaa 3060 acctcaagat ccccaaatat atgaagagac agtgctgtag ccttgagact aatgaacaaa qaaacctqct ctagttttac aggaccatat tttagggtct gtcctcatac ctgtcacatt 3180 ggtgatctca cagaggaggg ccatgccgct gaaaagggaa ggagattgaa acatttgatt 3240 gccttatcac atggtcaagt accttgccaa ataaaggaaa gcaaatgatt tgggtctcaa

ctgaagatga agctcaactc aggaagagat ttatctgtat atacacataa ctgaaaacca 3360

agtttaagcc caccaatgca ctgctgatgc atgccatata attaatgggt aacttttatt 3420

ctttatgatg tctacataac aagtgtgatt tggaaggcac atgtgagcat atgcattatg 3480

atccaattta tgttttttct ttgtttatat tttggggaaa attaaaattt ttttaaggta 3540

aaaaaaaaaa aaaaaa 3556

<210> 4

<211> 1027

<212> PRT

<213> human

<400> 4

Met Leu Phe Arg Ala Arg Gly Pro Val Arg Gly Arg Gly Trp Gly Arg 1 5 10

Pro Ala Glu Ala Pro Arg Arg Gly Arg Ser Pro Pro Trp Ser Pro Ala 20 25 30 .

Trp Ile Cys Cys Trp Ala Leu Ala Gly Cys Gln Ala Ala Trp Ala Gly
35 40 45

Asp Leu Pro Ser Ser Ser Ser Arg Pro Leu Pro Pro Cys Gln Glu Lys 50 55 60

Asp Tyr His Phe Glu Tyr Thr Glu Cys Asp Ser Ser Gly Ser Arg Trp 65 70 75 80

Arg Val Ala Ile Pro Asn Ser Ala Val Asp Cys Ser Gly Leu Pro Asp 85 90 95

Pro Val Arg Gly Lys Glu Cys Thr Phe Ser Cys Ala Ser Gly Glu Tyr 100 105 110

Leu Glu Met Lys Asn Gln Val Cys Ser Lys Cys Gly Glu Gly Thr Tyr 115 120 125

| Ser | Leu 130 | Gly | Ser | Gly | Ile | Lys 135 | Phe | Asp | Glu | Trp | Asp 140 | Glu | Leu | Pro | Ala |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 145 | Phe | Ser | Asn | Ile | Ala 150 | Thr | Phe | Met | Asp | Thr 155 | Val | Val | Gly | Pro | Ser 160 |
| Asp | Ser | Arg | Pro | Asp 165 | Gly | Cys | Asn | Asn | Ser 170 | Ser | Trp | Ile | Pro | Arg 175 | Gly |
| Asn | Tyr. | Ile | Glu 180 | Ser | Asn | Arg | Asp | Asp 185 | Cys | Thr | Val | Ser | Leu 190 | Ile | Tyr |
| Ala | Val | His 195 | Leu | Lys | Lys | Ser | Gly 200 | Tyr | Val | Phe | Phe | Glu 205 | Tyr | Gln | Tyr |
| Val | Asp 210 | Asn | Asn | Ile | Phe | Phe 215 | Glu | Phe | Phe | Ile | Gln 220 | Asn | Asp | Gln | Cys |
| Gln 225 | Glu | Met | Asp | Thr | Thr 230 | Thr | Asp | Lys | Trp | Val 235 | Lys | Leu | Thr | Asp | Asn 240 |
| Gly | Glu | Trp | Gly | Ser 245 | His | Ser | Val | Met | Leu 250 | Lys | Ser | Gly | Thr | Asn 255 | Ile |
| Leu | Tyr | Trp | Arg 260 | Thr | Thr | Gly | Ile | Leu 265 | Met | Gly | Ser | Lys | Ala 270 | Val | Lys |
| Pro | Val | Leu 275 | Val | Lys | Asn | Ile | Thr 280 | Ile | Glu | Gly | Val | Ala 285 | Tyr | Thr | Ser |
| Glu | Cys 290 | Phe | Pro | Cys | Lys | Pro 295 | Gly. | Thr | Phe | Ser | Asn 300 | Lys | Pro | Gly | Ser. |
| Phe 305 | Asn | Cys | Gln | Val | Cys 310 | Pro | Arg | Asn | Thr | Tyr 315 | Ser | Glu | Lys | Gly | Ala 320 |
| Lys | Glu | Cys | Ile | Arg 325 | Cys | Lys | Asp | Asp | Ser 330 | Gln | Phe | Ser | Gly | Ser 335 | Ser |
| Glu | Cys | Thr | Glu 340 | Arg | Pro | Pro | Cys | Thr 345 | Thr | Lys | Asp | Tyr | Phe 350 | Gln | Ile |
| His | Thr | Pro 355 | Cys | Asp | Glu | Glu | Gly 360 | Lys | Thr | Gln | Ile | Met 365 | Tyr | Lys | Trp |
| Ile | Glu 370 | Pro | Lys | Ile | Cys | Arg 375 | Glu | Asp | Leu | Thr | Asp 380 | Ala | Ile | Arg | Leu |

| Pro 385 | Pro | Ser | Gly | Glu | Lys 390 | Lys | Asp | Cys | Pro | Pro 395 | Cys | Asn | Pro | Gly | Phe 400 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Tyr | Asn | Asn | Gly | Ser 405 | Ser | Ser | Cys | His | Pro 410 | Cys | Pro | Pro | Gly | Thr 415 | Phe |
| Ser | Asp | Gly | Thr 420 | Lys | Glu | Cys | Arg | Pro 425 | Cys | Pro | Ala | Gly | Thr 430 | Glu | Pro |
| Ala | Leu | Gly 435 | Phe | Glu | Tyr | Lys | Trp 440 | Trp | Asn | Val | Leu | Pro 445 | Gly | Asn | Met |
| Lys | Thr 450 | Ser | Cys | Phe | Asn | Val 455 | Gly | Asn | Ser | Lys | Cys 460 | Asp | Gly | Met | Asn |
| Gly 465 | Trp | Glu | Val | Ala | Gly 470 | Asp | His | Ile | Gln | Ser 475 | Gly | Āla | Gly | Ġly | Ser 480 |
| Asp | Asn | Asp | Tyr | Leu 485 | Ile | Leu | Asn | Leu | His 490 | Ile | Pro | Gly | Phe | Lys 495 | Pro |
| Pro | Thr | Ser | Met 500 | Thr | Gly | Ala | Thr | Gly 505 | Ser | Glu | Leu | Gly | Arg 510 | Ile | Thr |
| Phe | Val | Phe 515 | Glu | Thr | Leu | Cys | Ser 520 | Ala | Asp | Cys | Val | Leu 525 | Tyr | Phe | Met |
| Val | Asp 530 | Ile | Asn | Arg | Lys | Ser 535 | Thr | Asn | Val | Val | Glu 540 | Ser | Trp | Gly | Gly |
| Thr 545 | Lys | Glu | Lys | Gln | Ala 550 | Tyr | Thr | His | Ile | Ile 555 | Phe | Lys | Asn | Ala | Thr. 560 |
| Phe | Thr | Phe | Thr | Trp 565 | Ala | Phe | Gln | Arg | Thr 570 | Åsn | Gľn | Gly | Gln | Asp 575 | Asn |
| Arg | Arg | Phe | Ile 580 | Asn | Asp | Met | Val | Lys 585 | Ile | Tyr | Ser | Ile | Thr 590 | Ala | Thr |
| Asn | Ala | Val 595 | Asp | Gly | Val | Ala | Ser 600 | Ser | Cys | Arg | Ala | Cys 605 | Ala | Leu | Gly |
| Ser | Glu 610 | Gln | Ser | Gly | Ser | Ser 615 | Cys | Val | Pro | Cys | Pro 620 | Pro | Gly | His | Tyr |
| Ile 625 | | Lys | Glu | Thr | Asn 630 | Gln | Cys | Lys | Glu | Cys 635 | Pro | Pro | Asp | Thr | Tyr 640 |

| Leu | Ser | Ile | His | Gln 645 | Val | Tyr | Gly | Lys | Glu 650 | Ala | Cys | Ile | Pro | Cys 655 | Gly |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Gly | Ser | Lys 660 | Asn | Asn | Gln | Asp | His 665 | Ser | Val | Cys | Tyr | Ser 670 | Asp | Cys |
| Phe | Phe | Tyr 675 | His | Glu | Lys | Glu | Asn 680 | Gln | Ile | Leu | His | Tyr 685 | Asp | Phe | Ser |
| Asn | Leu 690 | Ser | Ser | Val | Gly | Ser 695 | Leu | Met | Asn | Gly | Pro 700 | Ser | Phe | Thr | Ser |
| Lys 705 | Gly | Thr | Lys | Tyr | Phe 710 | His | Phe | Phe | Asn | Ile 715 | Ser | Leu | Cys | Gly | His 720 |
| Glu | Gly | Lys | Lys | Met 725 | Ala | Leu | Cys | Thr | Asn 730 | Asn | Ile | Thr | Asp | Phe 735 | Thr |
| Val | Lys | Glu | Ile 740 | Val | Ala | Gly | Ser | Asp 745 | Asp | Tyr | Thr | Asn | Leu 750 | Val | Gly |
| Ala | Phe | Val 755 | Cys | Gln | Ser | Thr | Ile 760 | Ile | Pro | Ser | Glu | Ser 765 | Lys | Gly | Phe |
| Arg | Ala 770 | Ala | Leu | Ser | Ser | Gln 775 | Ser | Ile | Ile | Leu | Ala 780 | Asp | Thr | Phe | Ile |
| Gly 785 | Val | Thr | Val | Glu | Thr 790 | Thr | Leu | Lys | Asn | Ile 795 | Asn | Ile | Lys | Glu | Asp 800 |
| Met | Phe | Pro | Val | Pro 805 | Thr | Ser | Gln | Ile | Pro 810 | Asp | Val | His | Phe | Phe 815 | Tyr |
| Lys | Ser | Ser | Thr 820 | Ala | Thr | Thr | Ser | Cys 825 | Ile | Asn | Gly | Arg | Ser 830 | Thr | Ala |
| Val | Lys | Met 835 | Arg | Cys | Asn | Pro | Thr 840 | Lys | Ser | Gly | Ala | Gly 845 | Val | Ile | Ser |
| Val | Pro 850 | | Lys | Cys | Pro | Ala 855 | Gly | Thr | Cys | Asp | Gly 860 | Cys | Thr | Phe | Tyr |
| Phe 865 | | Trp | Glu | Ser | Ala 870 | Glu | Ala | Cys | Pro | Leu 875 | Cys | Thr | Glu | His | Asp 880 |
| Phe | His | Glu | Ile | Glu 885 | Gly | Ala | Cys | Lys | Arg 890 | Gly | Phe | Gln | Glu | Thr 895 | Leu |

- Tyr Val Trp Asn Glu Pro Lys Trp Cys Ile Lys Gly Ile Ser Leu Pro 900 905 910
- Glu Lys Lys Leu Ala Thr Cys Glu Thr Val Asp Phe Trp Leu Lys Val 915 920 925
- Gly Ala Gly Val Gly Ala Phe Thr Ala Val Leu Leu Val Ala Leu Thr 930 935 940
- Cys Tyr Phe Trp Lys Lys Asn Gln Lys Leu Glu Tyr Lys Tyr Ser Lys 945 950 955 960
- Leu Val Met Thr Thr Asn Ser Lys Glu Cys Glu Leu Pro Ala Ala Asp 965 970
- Ser Cys Ala Ile Met Glu Gly Glu Asp Asn Glu Glu Glu Val Val Tyr 980 985 990
- Ser Asn Lys Gln Ser Leu Leu Gly Lys Leu Lys Ser Leu Ala Thr Lys 995 1000 1005
- Glu Lys Glu Asp His Phe Glu Ser Val Gln Leu Lys Thr Ser Arg 1010 1015 1020
- Ser Pro Asn Ile 1025
- <210> 5
- <211> 186
- <212> PRT
- <213> human
- <400> 5
- Met Asp Ile Lys Asn Leu Leu Thr Val Cys Thr Ile Phe Tyr Ile Thr 1 5 10 15
- Thr Leu Ala Thr Ala Asp Ile Pro Thr Ser Ser Leu Pro His Ala Pro 20 25 30
- Val Asn Gly Ala Cys Asp Glu Gly Glu Tyr Leu Asp Lys Arg His Asn 40 45
- Gln Cys Cys Asn Gln Cys Pro Pro Gly Glu Phe Ala Lys Val Arg Cys 50 55 60
- Asn Gly Asn Asp Asn Thr Lys Cys Glu Arg Cys Pro Pro His Thr Tyr

PF514P1replacement.ST25.txt

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------------------------|--------------|--------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr | Ala | Ile | Pro | Asn 85 | Tyr | Ser | Asn | Gly | Cys 90 | His | Gln | Cys | Arg | Lys 95 | Cys |
| Pro | Thr | Gly | Ser 100 | Phe | Asp | Lys | Val | Lys 105 | Cys | Thr | Gly | Thr | Gln 110 | Asn | Ser |
| Lys | Cys | Ser 115 | Cys | Leu | Pro | Gly | Trp 120 | Tyr | Cys | Ala | Thr | Asp 125 | Ser | Ser | Gln |
| Thr | Glu 130 | Asp | Cys | Arg | Asp | Cys 135 | Ile | Pro | Lys | Arg | Arg 140 | Cys | Pro | Cys | Gly |
| Tyr 145 | Phe | Gly | Gly | Ile | Asp 150 | Glu | Gln | Gly | Asn | Pro 155 | Ile | Cys | Lys | Ser | Cys 160 |
| Cys | Val | Gly | Glu | Tyr 165 | Cys | Asp | Tyr | Leu | Arg 170 | Asn | Tyr | Arg | Leu | Asp 175 | Pro |
| Phe | Pro | Pro | Cys 180 | Lys | Leu | Ser | Lys | Cys 185 | Asn | | | | | | |
| <210 <211 <212 <213 | l> 2 2> F | 5 277 PRT numar | ì | | | | | | | | | | | | |
| <400 |)> (| 5 | | | | | | | | | | | | | |
| Met 1 | Cys | Val | Gly | Ala 5 | Arg | Arg | Leu | Gly | Arg 10 | Gly | Pro | Cys | Ala | Ala 15 | Leu |
| Leu | Leu | Leu | Gly 20 | Leu | Gly | Leu | Ser | Thr 25 | Va.1 | Thr | Gly | Leu | His 30 | Cys | Val |
| Gly | Asp | Thr 35 | Tyr | Pro | Ser | Asn | Asp 40 | Arg | Cys | Cys | His | Glu 45 | Cys | Arg | Pro |
| Gly | Asn 50 | Gly | Met | Val | Ser | Arg 55 | Cys | Ser | Arg | Ser | Gln 60 | Asn | Thr | Val | Cys |
| Arg | | | | | | | | | | | | | | | |
| 65 | Pro | Cys | Gly | Pro | Gly 70 | Phe | Tyr | `Asn | Asp | Val 75 | Val | Ser | Ser | Lys | Pro 80 |

```
Gln Leu Cys Thr Ala Thr Gln Asp Thr Val Cys Arg Cys Arg Ala Gly
                                 105
            100
Thr Gln Pro Leu Asp Ser Tyr Lys Pro Gly Val Asp Cys Ala Pro Cys
        115
Pro Pro Gly His Phe Ser Pro Gly Asp Asn Gln Ala Cys Lys Pro Trp
                                             140
Thr Asn Cys Thr Leu Ala Gly Lys His Thr Leu Gln Pro Ala Ser Asn
                                         155
                    150
145
Ser Ser Asp Ala Ile Cys Glu Asp Arg Asp Pro Pro Ala Thr Gln Pro
                                     170
Gln Glu Thr Gln Gly Pro Pro Ala Arg Pro Ile Thr Val Gln Pro Thr
                                 185
Glu Ala Trp Pro Arg Thr Ser Gln Gly Pro Ser Thr Arg Pro Val Glu
                                                  205
                             200
        195
Val Pro Gly Gly Arg Ala Val Ala Ala Ile Leu Gly Leu Gly Leu Val
                                             220
                        215
    210
Leu Gly Leu Leu Gly Pro Leu Ala Ile Leu Leu Ala Leu Tyr Leu Leu
                                         235
                    230
225
Arg Arg Asp Gln Arg Leu Pro Pro Asp Ala His Lys Pro Pro Gly Gly
                                                          255
                                     250
Gly Ser Phe Arg Thr Pro Ile Gln Glu Glu Gln Ala Asp Ala His Ser
                                                      270
                                 265
            260
Thr Leu Ala Lys Ile
        275
       7
<210>
<211>
       8
<212>
       PRT
<213>
       human
<400> 7
Pro Cys Gln Glu Lys Asp Tyr His
<210>
       8
<211>
```

```
<212>
       PRT
<213>
       human
<400> 8
Gly Lys Glu Cys Thr Phe Ser Cys
                5
<210>
       9
<211>
<212>
       PRT
<213>
       human
<400> 9
Gly Cys Asn Asn Ser Ser Trp Ile
<210>
       10
<211>
       8
<212>
       PRT
<213>
       human
      10
<400>
Phe Glu Phe Phe Ile Gln Asn Asp
                 5
<210>
       11
<211>
       8
<212>
       PRT
<213>
       human
<400>
       11
Gly Ser His Ser Val Met Leu Lys
                 5
<210>
       12
<211>
<212>
       PRT
<213>
       human
<400>
       12
Thr Ile Glu Gly Val Ala Tyr Thr
```

```
<210>
      13
<211>
       8
       PRT
<212>
<213>
       human
<400>
       13
Ser Gln Phe Ser Gly Ser Ser Glu
<210>
       1:4
<211>
<212>
       PRT
<213>
       human
<400>
      14
Glu Glu Gly Lys Thr Gln Ile Met
<210>
      15
<211>
      8
<212>
      PRT
<213>
       human
<400> 15
Asp Gly Thr Lys Glu Cys Arg Pro
<210>
      16
<211>
       8
<212>
       PRT
<213>
      human
<400> 16
Asp Gly Met Asn Gly Trp Glu Val
                5
<210>
       17
<211>
       8
<212>
       PRT
<213>
      human
<400>
      17
```

Pro Gly Phe Lys Pro Pro Thr Ser

```
5
1
<210>
       18
<211>
       8
<212>
       PRT
<213>
       human
<400>
      18
Tyr Phe Met Val Asp Ile Asn Arg
                 5
<210>
       19
<211>
       8
<212>
       PRT
<213>
       human
<400>
      19
Gln Cys Gln Asp Asn Arg Arg Phe
<210>
       20
<211>
<212>
       PRT
<213>
       human
<400>
       20
Lys Asn Asn Gln Asp His Ser Val
<210>
       21
<211>
       8
<212>
       PRT
<213>
       human
<400>
      21
Cys Gly His Glu Gly Lys Lys Met
                 5
<210>
       22
<211>
<212>
       PRT
<213>
       human
<400>
       22
```

```
Asp Thr Phe Ile Gly Val Thr Val
<210>
       23
<211>
       8
<212>
      PRT
<213>
      human
<400> 23
Phe Phe Tyr Lys Ser Ser Thr Ala
                5
<210>
      24
<211>
      8
<212>
      PRT
<213> human
<400> 24
Ile Ser Val Pro Ser Lys Cys Pro
<210> 25
<211> 8
<212>
      PRT
<213> human
<400> 25
Arg Gly Phe Gln Glu Thr Leu Tyr
                5
<210>
      26
<211>
      8
<212>
       PRT
<213>
      human
<400> 26
Lys Asn Gln Lys Lys Lys Thr
<210>
       27
<211>
<212>
       PRT
<213>
       human
```

```
<400> 27
Lys Asn Gln Lys Leu Glu Tyr Lys
       28
<210>
<211>
<212>
       PRT
<213>
       human
<400>
       28
Leu Ala Thr Lys Glu Lys Glu Asp
                 5
<210>
       29
<211>
       43
<212>
       PRT
<213>
       human
<400>
       29
Met Ala Pro Trp Asn Val Leu Pro Gly Pro His Phe Pro His Ser Ser
                                                            15
                                      10
                 5
Arg Leu His Gly Ser Gly His Ser Arg Leu Ala Ala Ala Ile Ser
                                  25
                                                       30
             20
Ile Ala Leu Lys Ala Phe Ser Cys Ala Ser Gly
                              40
<210>
       30
<211>
       9
<212>
       PRT
<213>
       human
<400>
       30
Thr Ile Glu Glu Glu Gly Ser Ser Glu
<210>
       31
<211>
       74
<212>
       PRT
<213>
       human
<400>
       31
```

```
Cys Thr Glu Arg Pro Pro Cys Thr Thr Lys Asp Tyr Phe Gln Ile His
Thr Pro Cys Asp Glu Glu Gly Lys Thr Gln Ile Met Tyr Lys Trp Ile
                                                      30
Glu Pro Lys Ile Cys Arg Glu Asp Leu Thr Asp Ala Ile Arg Leu Pro
Pro Ser Gly Glu Lys Lys Asp Cys Pro Pro Cys Asn Pro Gly Phe Tyr
Asn Asn Gly Ser Ser Ser Cys His Pro Cys
                     70
<210>
       32
       29
<211>
<212>
       PRT
<213>
       human
<400>
       32
Thr Lys Gly Trp Trp Ile Ile Ser Gly Ser Ser Ser Leu Arg Arg Thr
                 5
Phe Lys His Ala Phe Cys Ser Thr Phe Ala Ala Glu Cys
                                 25
<210>
       33
<211>
       35
<212>
       PRT
<213>
       human
<400>
       33
Phe Lys Met Asp Gly Ile Ile Tyr Ser Lys Arg Phe Lys His Ile Thr
Ile Val Met Trp Thr Gln Cys Leu Gln Arg Val Trp Thr Gly Met Ile
Lys Pro Pro
         35
<210>
       34
<211>
       37
<212>
       PRT
```

```
<213> human
<400>
       34
Gln Asp Asn Arg Pro Ile Pro Pro Leu Ser Ile Ser Ile Val Pro Tyr
                5
                                     10
Val Ser Ile Val Ala Gly Leu Ile Leu Trp Ile Ser Ile Asp Val Thr
                                 25
            20
Phe Pro Arg Arg Phe
        35
<210>
       35
<211>
       78
       PRT
<212>
<213>
       human
<400>
       35
Lys Asn Gln Lys Leu Glu Tyr Lys Tyr Ser Lys Leu Val Met Thr Thr
                                                           15
Asn Ser Lys Glu Cys Glu Leu Pro Ala Ala Asp Ser Cys Ala Ile Met
                                 25
            20
Glu Gly Glu Asp Asn Glu Glu Glu Val Tyr Ser Asn Lys Gln Ser
                             40
Leu Leu Gly Lys Leu Lys Ser Leu Ala Thr Lys Glu Lys Glu Asp His
                         55
Phe Glu Ser Val Gln Leu Lys 'Thr Ser Arg Ser Pro Asn Ile
                                          75
<210>
       36
<211>
       46
<212>
       DNA
<213>
       human
<400> 36
gcagcacata tgggggacct gccctcctcc tccagccgcc cgcttc
     4.6
<210>
        37
<211>
        46
<212>
        DNA
```

```
<213> human
      37
<400>
gcagcaacta gtttagtcaa ccgtttcaca ggttgccaac tttttc
<210>
       38
<211>
       42
<212>
       DNA
<213>
       human
<400> 38
gcagcaggta cctcatatat ttggggatct tgaggttttc ag
<210>
       39
<211>
       48
<212>
      DNA
<213> human
<400> 39
gcagcaagat ctccgccatc atgctgttcc gcgcccgggg gccggtac
<210>
       40
<211>
       27
<212>
       DNA
<213>
       human
<400>
      40
gcagcacata tgctgttccg cgcccgg
    27
<210>
       41
<211>
       59
<212>
       DNA
<213>
       human
<400>
      41
cgcactagtt caagcgtagt ctgggacgtc gtatgggtag ttgaacagat tcaaaatgg
    59
<210> 42
```

<211> 733 <212> DNA <213> human 42 <400> gggatccgga gcccaaatct tctgacaaaa ctcacacatg cccaccgtgc ccagcacctg aattcgaggg tgcaccgtca gtcttcctct tccccccaaa acccaaggac accctcatga tctcccggac tcctgaggtc acatgcgtgg tggtggacgt aagccacgaa gaccctgagg 180 tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240 aggagcagta caacagcacg taccgtgtgg tcagcgtcct caccgtcctg caccaggact 300 ggctgaatgg caaggagtac aagtgcaagg tctccaacaa agccctccca acccccatcg 360 agaaaaccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420 catcccggga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga ccacgcctcc cgtgctggac tccgacggct ccttcttcct ctacagcaag ctcaccgtgg 600 acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660 acaaccacta cacqcaqaaq aqcctctccc tgtctccggg taaatgagtg cgacggccgc 720 gactctagag gat 733 <210> 43 <211> 464 <212> PRT

<213> human

<400> 43

Met Lys Asn Gln Val Cys Ser Lys Cys Gly Glu Gly Thr Tyr Ser Leu Gly Ser Gly Ile Lys Phe Asp Glu Trp Asp Glu Leu Pro Ala Gly Phe Ser Asn Ile Ala Thr Phe Met Asp Thr Val Val Gly Pro Ser Asp Ser Arg Pro Asp Gly Cys Asn Asn Ser Ser Trp Ile Pro Arg Gly Asn Tyr Ile Glu Ser Asn Arg Asp Asp Cys Thr Val Ser Leu Ile Tyr Ala Val 70 His Leu Lys Lys Ser Gly Tyr Val Phe Phe Glu Tyr Gln Tyr Val Asp Asn Asn Ile Phe Phe Glu Phe Phe Ile Gln Asn Asp Gln Cys Gln Glu 105 Met Asp Thr Thr Asp Lys Trp Val Lys Leu Thr Asp Asn Gly Glu 120 115 Trp Gly Ser His Ser Val Met Leu Lys Ser Gly Thr Asn Ile Leu Tyr 140 135 130 Trp Arg Thr Thr Gly Ile Leu Met Gly Ser Lys Ala Val Lys Pro Val 150 Leu Val Lys Asn Ile Thr Ile Glu Gly Val Ala Tyr Thr Ser Glu Cys 175 170 165 Phe Pro Cys Lys Pro Gly Thr Phe Ser Asn Lys Pro Gly Ser Phe Asn 185 180 Cys Gln Val Cys Pro Arg Asn Thr Tyr Ser Glu Lys Gly Ala Lys Glu 205 200 Cys Ile Arg Cys Lys Asp Asp Ser Gln Phe Ser Glu Glu Gly Ser Ser 220 215 Glu Cys Thr Glu Arg Pro Pro Cys Thr Thr Lys Asp Tyr Phe Gln Ile 240 230 225

PF514P1replacement.ST25.txt

| His | Thr | Pro | Cys | Asp 245 | Glụ | Glu | Gly | Lys | Thr 250 | Gln | Ile | Met | Tyr | Lys 255 | Trp |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile | Glu | Pro | Lys 260 | Ile | Cys | Arg | Glu | Asp 265 | Leu | Thr | Asp | Ala | Ile 270 | Arg | Leu |
| Pro | Pro | Ser 275 | Gly | Glu | Lys | Lys | Asp 280 | Cys | Pro | Pro | Cys | Asn 285 | Pro | Gly | Phe |
| Tyr | Asn 290 | Asn | Gly | Ser | Ser | Ser 295 | Cys | His | Pro | Cys | Pro 300 | Pro | Gly | Thr | Phe |
| Ser 305 | Asp | Gly | Thr | Lys | Glu 310 | Cys | Arg | Pro | Cys | Pro 315 | Ala | Gly | Thr | Glu | Pro 320 |
| Ala | Leu | Gly | Phe | Glu 325 | Tyr | Lys | Trp | Trp | Asn 330 | Val | Leu | Pro | Gly | Asn 335 | Met |
| Lys | Thr | Ser | Cys 340 | Phe | Asn | Val | Gly | Asn 345 | Ser | Lys | Cys | Asp | Gly 350 | Met | Asn |
| Gly | Trp | Glu 355 | Val | Ala | Gly | Asp | His 360 | Ile | Gln | Ser | Gly | Ala 365 | Gly | Gly | Ser |
| Asp | | Asp | Tyr | Leu | Ile | Leu 375 | Asn | Leu | His | Ile | Pro 380 | Gly | Phe | Lys | Pro |
| Pro 385 | Thr | Ser | Met | Thr | Gly 390 | Ala | Thr | Gly | Ser | Glu 395 | Leu | Gly | Arg | Ile | Thr 400 |
| Phe | Val | Phe | Glu | Thr 405 | Leu | Cys | Ser | Ala | Asp 410 | Cys | Val | Leu | Tyr | Phe 415 | Met |
| Val | Asp | Iļe | Asn 420 | Arg | Lys | Ser | Tḥr | Asn 425 | Val | Val | Glu | Ser | Trp 430 | Gly | Gly |
| Thr | Lys | Glu 435 | Lys | Gln | Ala | Tyr | Thr 440 | His | Ile | Ile | Phe | Lys 445 | Asn | Ala | Thr |
| Phe | Thr 450 | Phe | Thr | Trp | Gly | Ile 455 | Pro | Arg | Glu | Leu | Ile 460 | Gln | Gly | Pro | Arg |